

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-18 are currently a part of this application. Applicant affirms the election of claims 1-18 made with traverse by William J. Davis on December 20, 2005. Claims 19-29 are withdrawn. Applicants reserve the right under 35 U.S.C. §121 to file one or more divisional applications directed to the non-elected claims in the application.

In the Office Action, claim 18 is rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner asserts that it is not clear what is meant by “non-water-resistant polypropylene substrate,” and queries whether the substrate is permeable or porous to water.

In response, Applicants respectfully submit that a “non-water-resistant” substrate denotes a material that is substantially pervious to water, i.e., a material that permits water permeation from the exterior of the roofing to the interior of the roofing. This is clearly defined in paragraph [0009] on page 3 of the specification. Accordingly, it is respectfully requested that the 35 U.S.C. §112, second paragraph, rejection of claim 18 be withdrawn.

Claims 1-2, 4-7, 12, and 16-17 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by EP 1,245,620 (hereinafter “EP ‘620”). According to the Examiner, EP ‘620 discloses a breathable film material comprising a polyolefin resin such as polypropylene which is laminated to a substrate such as a polyolefin nonwoven fabric. The Examiner states that the material is suitable for use in forming waterproofing sheets for roofs and that the film may further comprises additives such as alumina to impart heat and flame resistance. With regard to

claim 17, the Examiner stated that claim 17 recites a statement of intended use and does not structurally further limit the structure of claim 1.

Claims 1-2, 4-8, 10 and 17 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by WO 9637668 (hereinafter “WO ‘668”). According to the Examiner, WO ‘668 discloses a barrier laminate comprising a breathable film layer comprising polyurethane and a substrate layer, which, according to the Examiner may comprise woven, felt, knitted or nonwoven fabrics. According to the Examiner, the substrate layer is coated with a film layer, and the substrate layer may comprise natural or synthetic fibers such as cotton, linen, jute, hemp, sisal, regenerated or modified cellulosic fibers, mineral fibers, polyester, polyamide, polyacrylic or PVC fibers. With regard to claim 17, the Examiner stated that claim 17 recites a statement of intended use and does not structurally further limit the structure of claim 1.

Claims 1-2, 4-7, 10, 13-14, 17 and 18 are rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent No. 6,645,336 to Albertone, et al (hereinafter “Albertone”). The Examiner asserts that Albertone discloses a breathable film which may comprise polyether, polyurethane, polyether ester, polyether amide, polyvinyl alcohol polymers and copolymers. According to the Examiner, a tie layer of copolymers comprising ethylene vinyl acetate can be used to facilitate bonding between the film and nonwoven substrate layer. With regard to claim 17, the Examiner states that claim 17 recites a statement of intended use and does not structurally further limit the structure of claim 1 and that the laminated film is useful in roofing and the thickness of the film encompasses the claimed range.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over EP ‘620. According to the Examiner, EP ‘620 discloses a laminate material as set forth above in the rejection under 35 U.S.C. 102(b). The Examiner states that EP ‘620 differs from the claimed

invention because it does not disclose the claimed thickness of the substrate. The Examiner asserts that it would be obvious to one of ordinary skill in the art at the time the invention was made to select the thickness of the substrate through the process of routine experimentation in order to arrive at a laminate which had the desired strength, weight, breathability, etc.

Claim 3 is rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over each of EP '620, WO '668 (described above) and Albertone (also described above), each in view of U.S. Patent No. 4,511, 619 to Kuhnel et al. (hereinafter "Kuhnel"). Although the Examiner concedes that none of the cited references of EP '620, WO '668 and Albertone teach disposing the film on both sides of the fabric substrate layer, Kuhnel teaches that in forming roofing materials that the film can be disposed on both sides of the fabric so that the fabric can strengthen the film. Accordingly, the Examiner alleges the combination of references teaches the elements of the claim.

Claims 11 and 15 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Albertone in view of U.S. Patent No. 6,300,257 to Kirchberger, et al (hereinafter "Kirchberger"). Although the Examiner concedes that Albertone does not disclose that the polymer layer or the tie layer comprises methyl methacrylate, the Examiner alleges that Kirchberger teaches that methyl methacrylate can be added to layers of breathable roofing materials in order to improve the interlaminar bonding strength of layers which contain ethylene copolymers. Therefore, the Examiner alleges the combination of references teaches the elements of the claims.

In the prior art, as well as the references cited by the Examiner, the underlayments are non-breathable, i.e., they do not allow for air or water vapor to pass through it. As a result, the

moisture from the interior of the building is unable to escape to the exterior of the building resulting in damage to the roof over time.

The present invention provides an improved non-asphaltic underlayment useful in roof assemblies which comprises a substrate in which at least one surface thereof includes a breathable thermoplastic film, which can be selected from a polyurethane based thermoplastic film, an ethylene-methacrylate (EMA) copolymer or ethylene acrylic acid based thermoplastic film, or a micro-porous polyolefinic or polyester film. The breathable thermoplastic film prevents water and/or moisture from entering the building, and still allows moisture to escape from inside the building.

To further define the term breathable in the claims as pointed out in the specification, Applicants have amended independent claims 1 and 18 to define the term breathable as permeable to water vapor or moisture having a minimum moisture vapor transmission rate (MTVR) of 3 perms or greater. The MTVR is measured using a standard ASTM measurement, i.e., ASTM E96-80 Proc. A. Support for the amendment is found throughout the specification, and specifically, in paragraph [0010] on page 3. Therefore, Applicants respectfully submit that no new matter has been added by way of the amendment to independent claims 1 and 18.

The cited references of EP '620, WO '668 and Albertone all fail to teach a breathable thermoplastic film, and more specifically, a breathable thermoplastic film that has a minimum moisture vapor transmission rate of 3 perms or greater. The presence of the breathable film on the substrate makes the resultant composite water-resistant and yet imparts breathability of the substrate. The inventive non-asphaltic underlayment of the present invention acts as a barrier to moisture, but allows air and water vapor to pass therethrough. In addition to providing water-resistance to the substrate, the presence of one of the aforementioned breathable thermoplastic

films on a top surface of the substrate also imparts improved skid resistance, i.e., high coefficient of resistance, to the non-asphaltic underlayment. Such an underlayment having a skid-resistant surface will also provide improved adhesion of asphaltic peel and stick adhesive products to the underlayment where the latter is used as a base sheet.

With respect to the §102 rejection of independent claims 1 and 18 under the references of EP '620, WO '668 and Albertone, it is axiomatic that anticipation of a claim under §102 requires that the prior art reference disclose each and every element of the claim to which it is applied. In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986). Thus, there must be no differences between the subject matter of the claim and the disclosure of the applied prior art reference. Stated another way, the reference must contain within its four corners adequate direction to practice the invention as claimed. The corollary of the rule is equally applicable: the absence from the applied reference of any claimed element negates anticipation. Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986).

As the cited references of EP '620, WO '668 and Albertone all fail to teach a breathable thermoplastic film that has a minimum moisture vapor transmission rate of 3 perms or greater, Applicants respectfully submit that the §102 rejections of the independent claims 1 and 18 are improper. Further, as dependent claims 2-17 all teach unique elements and/or limitations inclusive to that of independent claim 1, the §102 and §103 rejections of the dependent claims must also be improper.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 102(b) rejection of claims 1-2, 4-7, 12, and 16-17 under EP '620, the 35 U.S.C. § 102(b) rejection of claims 1-2, 4-8, 10 and 17 under WO '668, the 35 U.S.C. § 102(e) rejection of claims 1-2, 4-7, 10, 13-14, 17 and 18 under Albertone, the 35 U.S.C. § 103(a) rejection of claim 9 over EP '620,

the 35 U.S.C. § 103(a) rejection of claim 3 over each of EP '620, WO '668 and Albertone in view of Kuhnel, and the 35 U.S.C. § 103(a) rejection of claims 11 and 15 over Albertone in view of Kirchberger. Accordingly, Applicants respectfully request allowance of claims 1-18.

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorney would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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